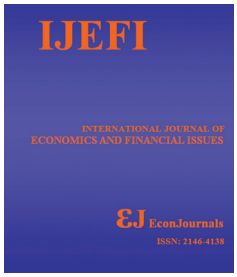

International Journal of Economics and Financial Issues

ISSN: 2146-4138

available at http: www.econjournals.com

International Journal of Economics and Financial Issues, 2025, 15(5), 38-45.

Unraveling the Financial Impact of ESG Performance: Evidence from NSE Listed Companies in India

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Received: 26 February 2025 **Accepted:** 03 July 2025 **DOI:** https://doi.org/10.32479/ijefi.19471

ABSTRACT

In the present corporate world, as social and environmental concerns about corporate resource management and economic operations have grown, sustainability has become increasingly important, leading to a re-examination of the ethical dimensions of business. As such, businesses are attempting to be socially responsible by using a dualistic strategy that strikes a balance between social responsibility and welfare and financial performance. Environmental, Social and Governance (ESG) is one such yardstick which promotes social responsibility and welfare. The present study attempts to assess whether ESG parameters influence the financial outcomes of National Stock Exchange (NSE) listed companies in India. To validate the results, ADF Unit Root Test, Granger Causality Test and Regression Models have been used. The results reveal that the individual ESG scores showcased a positive influence on financial performance and the overall ESG scores displayed a mixed and insignificant influence on the financial performance.

Keywords: Sustainability, Environmental, Social, Governance, Environmental, Social and Governance Performance, Financial Performance, NIFTY 50
JEL Classifications: C1, G3, G4, Q5

1. INTRODUCTION

ESG, a word many in the corporate sector are familiar with, signifies three major components of sustainable working, which are Environmental, Social and Governance. In today's world, where more and more emphasis is being given on sustainability in the corporate sector with an increased focus on what companies are doing to promote sustainability, ESG has emerged as a viable way to examine the contribution of the corporate sector through a lens.

Given a significant number of countries have proposed "carbon neutral" projects, environmental, social, and governance (ESG) investment has entered a period of exponential growth in recent decades. In today's unstable global context, industry and academia ought to give greater consideration to ESG (Chen et al., 2023).

An increasing number of Korean firms are engaged in CSR efforts. In fact, numerous companies are involved in CSR efforts today as compared to earlier. Nevertheless, there is a lack of a well-defined CSR reporting system in Korea, most likely due to the absence of data on the link between CSR and financial success (Kim et al., 2013). The interest of companies in the ESG framework has become more intense in recent years, as they recognize that apart from an improved reputation, ESG criteria can add value to them and help them to become more effective in their functioning (Koundouri et al., 2022).

ESG consists of three elements E- Environmental S-Social and G- Governance Which can be considered as a set of parameters for assessing a company's overall impact in addition to typical financial indicators. The three elements are further discussed as presented in Figure 1.

The Environmental criterion evaluates how a corporation associates with the natural environment. It takes into account aspects such as carbon emissions, energy conservation, waste

Figure 1: ESG framework

Source: CRISIL's ESG scoring methodology, 2023

management, water consumption etc. Companies are increasingly required to reduce their environmental impact while adhering to climate change goals and implementation of sustainable practices.

The Social criterion assess a company's interactions with its employees, suppliers, customers, and the community at large. This includes areas like staff diversity and inclusiveness, employment laws, involvement with the community, human rights, consumer safeguards etc. Companies are urged to promote beneficial social outcomes, which can boost employee morale, customer loyalty, and support from the community.

Governance encompasses a company's managerial processes, including transparency, responsibility, management etc. In Governance key considerations include executive salary, board representation and framework, rights for shareholders, and responsible corporate practices. Strong governance secures a company's ethical code of conduct, minimizes conflicts of interest, and promotes confidence among stakeholders.

Over the years a number of rating agencies have developed their ESG scoring Matrix. CRISIL is one such rating agency. The methodological framework of CRISIL, for generating overall ESG scores, assigned relevant weightage to each element of ESG as a percentage where E = 35%, S = 25% and G = 40%. This assignment of weightage reflects the importance of each element. CRISIL assigned the highest weightage to Governance as it believes that good Governance is the foundational element which drives the Environment and social objective of any corporation.

In modern times companies are becoming more conscious of their actions and the impact that those actions might have on the society at large which will inevitably be linked to their reputation as a business. As such, ESG standards are being utilized by many businesses to enrich their decision making with social responsibility and environmental protection agendas. Although it is a positive initiative taken by the corporations a specific question is likely to rise in the minds of many; Can upholding ESG standards contribute to the financial performance of the businesses?

2. REVIEW OF LITERATURE AND HYPOTHESIS DEVELOPMENT

To find possible answers to this question, multiple initiatives have been undertaken since the 1970s. Researchers and investors have produced over 2000 empirical research papers and plenty of review studies investigating the connection between ESG and Corporate Financial Performance. Findings from the largest prior review study are tricky to generalize considering that those studies only examined a small portion of the primary research that has been done. In accordance to the current research, ESG practices may enhance financial performance by means of a variety of tactics, namely, cost optimization (Azmi et al., 2021), risk control (Galletta et al., 2023), investor enticements (Friedman and Heinle, 2021), business climate (Gangi et al., 2020), and relationships with stakeholders (Lee and Raschke, 2023). Thus, there is still a lack of consensus regarding the financial impact of ESG standards (Friede et al., 2015). Understanding the linkage between ESG and corporate performance is crucial for every business. To develop a comprehensive understanding, a study discovered that return on assets (ROA) is positively impacted by ESG performance, while Tobin's Q remains unaffected. Furthermore, governance performance exhibits the most significant influence on financial performance. (Velte, 2017). A study was conducted to see whether public-listed banks in ASEAN nations get benefited by ESG operations. The results indicated that ESG practices had a considerable negative influence on financial performance, which contradicted the majority of the existing literature (Marasigan**,** 2024). Another study integrated the results of nearly 2200 separate investigations which offered a comprehensive summary of academic research on the subject and facilitated generalizable conclusions. A positive relationship between ESG and financial performance is found in close to 90% of the investigations. The research also points out that the beneficial effect of ESG on Corporate Financial Performance seems to be consistent over time (Friede et al., 2015). Similarly, an investigation conducted in 2023 studies the effect of ESG rating on financial performance as measured by ROA. The results indicated a significant positive association between ESG and corporate performance. Furthermore, it was unveiled that the impact of ESG ratings is considerable for large-scale enterprises but negligible for small-scale businesses

(Chen et al., 2023). Another study highlights the favorable impact of corporate social responsibility on financial success. MCSI data on Korean enterprises' CSR performance showed a favorable correlation with stock returns and Tobin's Q in the Korean market. (Kim et al., 2013). Annual reports of 13 manufacturing companies listed on the Indonesia Stock Exchange were used as a sample for a study. Panel data regression was utilized as an analytical method, with the ESG ratings given by Bloomberg. The outcomes suggested that social, governance and ESG performance have a favorable influence on the company's financial performance, however the environmental performance shows a detrimental and insignificant impact on the financial performance (Zahroh and Hersugondo, 2021). An investigation was conducted to assess whether any connection exist between high ESG performance and the favorable economic condition of organizations. The study included the top 50 European firms in terms of ESG performance as determined by the STOXX Europe ESG Leaders 50 Index. The findings revealed an obvious superiority of economic viability across all sectors by companies with strong ESG performance against the remainder (Koundouri et al., 2022). On the other hand, another study conducted to analyze the correlation between Return on Asset and ESG Rating with sample size of 148 companies listed in the BSE500 over a period of 2 years. The results arrived at the conclusion that there is a significant negative linkage between the ESG rating and the firm's performance (Devi and Sapna, 2024). Another study investigated the impact of ESG on the financial outcomes of UK enterprises. The findings demonstrated that ESG had a positive and significant impact on the financial performance of businesses. However, the outcomes related to individual ESG performance were somewhat varied. Overall, the results indicate that high ESG enterprises perform financially better than low ESG firms (Ahmad et al., 2021). An investigation was carried out to determine the impact of ESG disclosure on the financial results of the companies. The findings suggested that ESG disclosures have an advantageous impact on the firm financial performance (Chen and Xie, 2022). Another study concluded that sustainability driven corporations' outperformed firms which are not driven by sustainability (Khan et al., 2016). A similar study was conducted by (Eccles et al., 2014) which supports the results of (Khan et al., 2016). A further study investigated a shift in the significance of sustainability in the US mutual fund market and found causal evidence that investors generally appreciate sustainability. The findings revealed that investors consider sustainability to be a favourable indicator of future performance (Hartzmark and Sussman, 2019).

While there are a significant number of studies conducted on the influence of ESG on financial performance globally, the majority of previous ESG studies have been undertaken in western settings or in markets outside India. This has left a vacuum in the comprehension of how sustainability-related concerns influence financial performance in India's distinct regulatory, cultural, and economic frameworks. Furthermore, the distinctive effects of ESG on various segments of the NSE as a whole is frequently neglected, indicating a need for industry-wide research. Nifty 50 companies consist of the top 50 largest companies in the country and as such, these companies can be considered as the benchmark for the entire industry. Therefore, studying the financial performance of these companies and the various factors affecting such performances becomes important for developing a foundation for the other companies and their respective stakeholders. It has been observed that companies have started to focus on their social responsibilities along with the goal of profit maximization. Henceforth, they have started enhancing their ESG profile which is seen as a barometer for CSR initiatives. Thus, studying the impact of such ESG factors on financial outcomes becomes significant.

Based on the review of literatures and objectives of the study, the following null hypotheses have been developed:

H_{01}: Environmental performance does not significantly influence financial performance

H_{02}: Social performance does not significantly influence financial performance

H_{03}: Governance performance does not significantly influence financial performance

H_{04}: ESG performance does not significantly influence financial performance.

The objectives of the study include:

- To investigate the impact of Environmental elements on the financial performance of NSE listed companies in India
- To investigate the impact of Social elements on the financial performance of NSE listed companies in India
- To investigate the impact of Governance elements on the financial performance of NSE listed companies in India
- To investigate the overall impact of ESG performance on the financial outcomes of NSE listed companies in India.

3. RESEARCH METHODOLOGY

3.1. Research Design and Sample Selection

The study is descriptive and analytical in nature consisting of secondary data collected from various annual reports, audited financial statements, CRISIL and Prowess database over a period of 3 financial years i.e. from 2020-21 to 2022-23. The study has considered the top 50 NSE listed companies across different sectors on the basis of market capitalization. The following Table 1 consists of the different sectors of the 50 companies considered as sample for the study.

3.2. Description of Variables

A summary of the different variables taken for the study has been included in Table 2.

3.3. Tools of Analysis

In order to assess the impact of individual and total ESG performance on financial performance of the selected companies, appropriate models have been used. The analysis, primarily employs multiple linear regression model to capture the influence of ESG performance on financial outcomes. Multiple regression equations have been used where the measures of financial performance (ROCE and ROA) have been considered as dependent variables, the measures of ESG performance (ES, SS, GS and ESG) have been considered as independent variables and firm size (SIZE) and leverage (LEV) have been used as the control variables. The conceptual framework of the research model is depicted in

Table 1: Number of companies across different sectors

Sl. No.	Industry	Number of companies	Proportion (%)
1	Automobiles	6	12
2	Banking	6	12
3	Energy	4	8
4	Finance	3	6
5	FMCG	2	4
6	Food and Tobacco	2	4
7	Insurance	2	4
8	Pharmaceuticals	3	6
9	Power	2	4
10	Retailing	2	4
11	Software	5	10
12	Steel	2	4
13	Miscellaneous	11	22
	Total	50	100

Table 2: Variables of the study

Sl. No.	Variables	Description
		Dependent variables
1	Return on capital employed (ROCE)	Measures how efficiently has the capital been utilized to generate operating income during a particular period. ROCE=EBIT/Capital employed
2	Return on assets (ROA)	A significant metric for corporate profitability which measures how much profits a company has earned relative to its total assets ROA=Net income/Total assets
		Independent variables
1	Environmental score (ES)	A pillar score that measures the corporate impact on natural systems, including air, land and water (Velte, 2019)
2	Social score (SS)	A pillar score that measures the corporate potential to generate lasting trust and loyalty with its stakeholders (Velte, 2019)
3	Governance score (GS)	A pillar score that measures the corporate systems and processes that ensure that the top level management act in their best interests as long-term shareholders (Velte, 2019)
4	ESG score	Measures the overall score calculated on the basis of 35% weightage to ES, 25% to SS and 40% to GS (CRISIL, 2023)
		Control variables
1	Firm size (SIZE)	Determines total assets of the company
2	Leverage (LEV)	Determines the inclusion of debt in the capital structure

Source: Compiled by the researcher

Figure 2, which portrays the hypothesized relationship among the study variables. Additionally, in order to make the data set fit for regression and thus, avoid spurious regression results, Unit Root test, Granger Causality Test and Multicollinearity test have been conducted on the dataset.

The following regression models have been used:

1. $ROCE = \alpha + \beta_1.ES + \beta_2.SS + \beta_3.GS + \beta_4.ESG + \beta_5.SIZE + \beta_6.LEV + e$ (1)
2. $ROA = \alpha + \beta_1.ES + \beta_2.SS + \beta_3.GS + \beta_4.ESG + \beta_5.SIZE + \beta_6.LEV + e$ (2)

The following figure covers the entire research framework for the study:

4. DATA ANALYSIS

Table 3 provides simple descriptive statistics in the form of range, average and dispersion across the financial and ESG variables in the sample.

The mean ROCE of 15.34 suggests moderate returns on total capital employed across the select companies, although with a wide range from 0.58 to 66.04, implying that some companies earned high returns, while some other companies earned less returns. The mean ROA is 6.92 with a range of 33.33, indicating variability in return on assets across the companies. In terms of ESG components, corporate governance disclosures (GS) ranks the highest with a mean of 70, followed by social score (SS) with a mean of 59.63. The mean environmental score (ES) is lower, with a score of 54.29, indicating a comparatively little focus on environmental factors within the dataset. The overall ESG score averages at 62.31, with scores ranging from 44 to 79, implying that while some companies are positive towards ESG transparency, others are still trying to make a way out. The firm size variable, with an average of 396,435.44 and a sizable range, reflects the presence of both large cap and small cap companies. Leverage, with an average of 1.36, reflects that the sample companies are moderately levered. However, the broad range of 0-7.39 indicates that while some companies are entirely unlevered; some other companies are heavily dependent on debt capital.

To make the data set fit for carrying out regression analysis, Unit Root Test is required to be conducted. It is a statistical technique to test whether a time series data possesses any unit root. Existence of a unit root implies that the variable is affected by random shocks and hence, lacks stability. Thus, to ensure reliability, the data set should not have any unit root or in other words, should be stationary.

Table 4 shows the values of Augmented Dickey-Fuller Test which has been conducted to check for the stationarity of the time series data. As per the test, the null hypothesis assumes that the considered variables have a unit root (non-stationary). And, the alternative hypothesis suggests that the variables do not have any unit root (stationary). It can be seen that in case of all the 10 variables, the $P < 0.05$ implying that the null hypothesis has been rejected. Thus, it can be concluded that the data series do not possess any unit root and hence are stationary.

Table 5 displays the results of correlation matrix focusing on the degree of association between the dependent variables (ROCE and ROA) on one hand, and the independent variables (ES, SS, GS, ESG) and control variables (FIRM SIZE and LEVERAGE) on the other.

The results reveal that in most of the cases, there is an existence of positive relationship between the degrees of operating leverage and the parameters of profitability and taxation while, Table 5

Table 3: Descriptive statistics

Variables	Range	Minimum	Maximum	Mean	Standard deviation
ROCE	65.46	0.58	66.04	15.34	12.24
ROA	33.33	-3.63	29.71	6.92	6.66
ES	51.00	30.00	81.00	54.29	12.12
SS	40.00	35.00	75.00	59.63	6.18
GS	36.00	50.00	86.00	70.00	7.10
ESG	35.00	44.00	79.00	62.31	7.41
FIRM SIZE	5948090.37	6327.95	5954418.32	396435.44	843180.48
LEVERAGE	7.39	0.00	7.39	1.36	1.85

Source: Data compiled by the researcher using SPSS 26

Table 4: Results of augmented Dickey-Fuller (ADF) unit root test

Sl. No.	Variables	ADF t-statistic	P-value	Order of integration	Result
1	ES	−5.853654	0.0000	I (0)	Stationary
2	SS	−6.337660	0.0000	I (0)	Stationary
3	GS	−6.749922	0.0000	I (0)	Stationary
4	ESG	−5.757700	0.0000	I (0)	Stationary
5	SIZE	−7.237306	0.0000	I (0)	Stationary
6	LEVERAGE	−7.634158	0.0000	I (0)	Stationary
8	ROCE	−7.761632	0.0000	I (0)	Stationary
9	ROA	−6.710303	0.0000	I (0)	Stationary

Source: Data compiled by the researcher using EViews 12

reveals that in most of the cases there is an existence of positive relationship between the individual and overall scores of ESG and financial performance.

Table 5 also shows the results of the multicollinearity test. As a general rule, the predictor variables should not possess strong association with each other as it would make the regression model unfit for any estimation. It can be seen that the VIF values of the independent variables are within the threshold limit of 10 (Hair et al., 1995) i.e. the VIF values range from 1.165 to 4.149. Moreover, their tolerance levels (1/VIF) also range from 0.241 to 0.858 which is more than 0.2 (Hair et al., 1995). Hence, this rules out the existence of multi-collinearity between the variables, which makes the regression model fit for estimation.

Table 6 shows the results of Granger Causality Test as extracted from EViews 12.

It has been observed from Table 6 that all the 12 null hypotheses relating to the measures of financial performance have been rejected as the P-values were <0.05. This implies that as per the results of Granger Causality test, the degrees of leverage significantly granger causes the respective parameters of financial performance reflecting on the fact that the changes in the various ESG scores have significant power to predict changes in the financial indicators.

5. RESULTS AND DISCUSSIONS

In order to assess the impact of individual and total ESG performance on financial performance of the selected companies, multiple regression models have been used. The regression results as obtained are reported as under:

Table 7 and Table 8 presents the results of multiple linear regression for Model 1 and Model 2. As per the regression models, each measure of financial performance (ROCE and ROA) has been used to regress each measure of ESG performance (ES, SS, GS and ESG). As per the analysis, the R-squared values of 0.3330 and 0.3632 for Model 1 and 2 indicate that the independent and control variables explain 33.30% and 36.32% variations in the financial performance of the companies as measured by ROCE and ROA respectively. This indicates a moderate level of explanatory power of the model to predict changes in the financial performance. Furthermore, the F-statistic for both the models possess a P = 0.000000 implying that the model is statistically significant for prediction and hence, perfectly fit.

As per the results of both the multivariate regression models, using the coefficient values, the regression equations can be represented as:

1. ROCE = –17.306 + 0.281ES + 0.402SS + 0.266GS-0.322ESG-0.000003945SIZE-2.635LEV (1)
2. ROA = –11.900 + 0.114ES + 0.126SS + 0.107GS + 0.008ESG-0.000001605SIZE-1.668LEV (2)

Based on each null hypotheses, the results are interpreted as below:

H_{01}: Environmental Performance does not significantly influence financial performance.

Table 7 and Table 8 shows that the coefficient values for ES are 0.281 (Model 1) and 0.114 (Model 2) with P > 0.05, indicating that although environmental score (ES) positively influences financial performance of the companies, the defined relationship is not statistically significant. Hence, Hypothesis 1 is failed to be rejected. This implies that the direction of the coefficient is positive, indicating that ES favourably impacts financial performance as surrogate by ROCE and ROA. This can be attributed to customer attraction towards environment friendly products and companies which can lead to increased and enhanced sales, ultimately driving the profits on an upper note (Hansen and Mowen, 2017).

H_{02}: Social Performance does not significantly influence financial performance.

Table 7 and Table 8 displays that the coefficient values for SS are 0.402 (Model 1) and 0.126 (Model 2) with P = 0.040 and 0.022, being <0.05. This reflects that social score (SS) has a significant positive impact on financial performance of the companies as proxied by ROCE and ROA. Hence, Hypothesis 2 is rejected. The results imply that the direction of the coefficient is positive,

Table 5: Correlation matrix and multicollinearity test

Variables	ROCE	ROA	ES	SS	GS	ESG	Firm size	Leverage	VIF	Tolerance levels
ROCE	1									
ROA	0.942**	1								
ES	0.182*	0.228*	1						4.149	0.241
SS	0.140	0.137	0.480**	1					2.042	0.490
GS	0.158	0.207*	0.591**	0.255**	1				2.961	0.338
ESG	0.174*	0.231	0.910**	0.600**	0.737**	1			3.355	0.298
FIRM SIZE	−0.339**	−0.293**	0.128	0.212**	0.127	0.161*	1		1.175	0.851
LEVERAGE	−0.431**	−0.464**	0.184*	0.154	0.087	0.191*	0.339**	1	1.165	0.858

**.Correlation is significant at the 0.01 level (2-tailed).
*.Correlation is significant at the 0.05 level (2-tailed).
Source: Data compiled by the researcher using SPSS 26

Table 6: Results of granger causality test

Sl. No.	Null hypothesis	Observations	F-statistic	P-value	Result
1	ES does not Granger Cause ROCE	150	2.52682	0.03	Causal
2	SS does not Granger Cause ROCE	150	12.5739	0.00009	Causal
3	GS does not Granger Cause ROCE	150	2.54182	0.0823	Causal
4	ESG does not Granger Cause ROCE	150	3.47396	0.0337	Causal
5	ES does not Granger Cause ROA	150	12.0745	0.00001	Causal
6	SS does not Granger Cause ROA	150	3.13332	0.0466	Causal
7	GS does not Granger Cause ROA	150	2.63811	0.0750	Causal
8	ESG does not Granger Cause ROA	150	14.488	0.00002	Causal
9	SIZE does not Granger Cause ROCE	150	9.67956	0.0001	Causal
10	LEV does not Granger Cause ROCE	150	3.51938	0.0423	Causal
11	SIZE does not Granger Cause ROA	150	1.89233	0.0245	Causal
12	LEV does not Granger Cause ROA	150	3.15243	0.0398	Causal

Source: Data compiled by the researcher using EViews 12

Table 7: Regression results for model 1

Model 1: ROCE = = α + β1.ES + β2.SS+ β3.GS+ β4.ESG + β5.SIZE + β6.LEV+e					
Variables	**Coefficient**	**Standard error**	**Beta**	**T**	**P-value**
(Constant)	−17.306	11.457		−1.510	0.133
ES	0.281	0.184	0.279	1.530	0.128
SS	0.402	0.194	0.203	2.076	0.040
GS	0.266	0.203	0.154	1.313	0.191
ESG	−0.322	0.421	−0.195	−0.766	0.445
SIZE	−3.945E−06	0.000	−0.272	−3.670	0.000
LEVERAGE	−2.635	0.488	−0.398	−5.395	0.000
R-squared	0.333013		F-statistic		11.89952
Adjusted R-squared	0.305028		P-value (F-statistic)		0.000000
S.E. of regression	10.20689		D-W statistic		2.197752

Source: Data compiled by the researcher using SPSS 26

Table 8: Regression results for model 2

Model 2: ROA = = α + β1.ES + β2.SS+ β3.GS+ β4.ESG + β5.SIZE + β6.LEV+e					
Variables	**Coefficient**	**Standard error**	**Beta**	**T**	**P-value**
(Constant)	−11.900	6.090		−1.954	0.053
ES	0.114	0.098	0.208	1.167	0.245
SS	0.126	0.103	0.117	1.229	0.022
GS	0.107	0.108	0.115	0.998	0.320
ESG	0.008	0.224	0.008	0.034	0.973
Size	−1.605E−06	0.000	−0.203	−2.809	0.006
Leverage	−1.668	0.260	−0.463	−6.427	0.000
R-squared	0.363265		F-statistic		13.59718
Adjusted R-squared	0.336548		P-value (F-statistic)		0.000000
S.E. of regression	5.425173		D-W statistic		2.101054

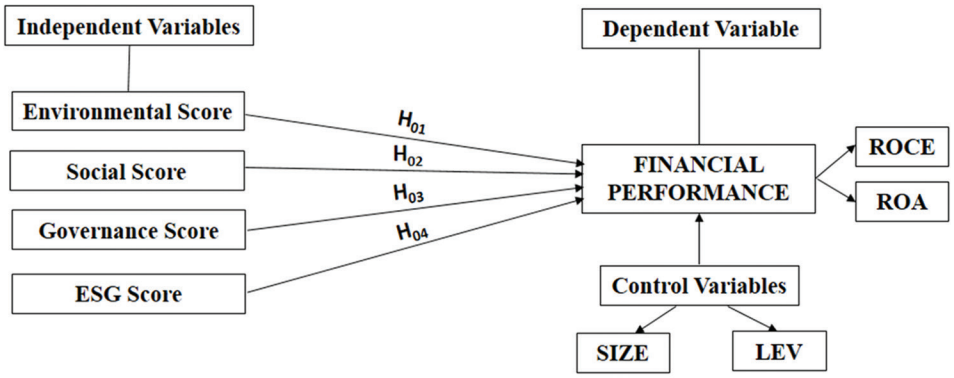
Source: Data compiled by the researcher using SPSS 26

indicating that SS favourably impacts financial performance. The results obtained are in line with the study conducted by Velte (2019) which unveils that being socially active by undertaking CSR activities will result in enhanced social and financial performance.

H_{03}: Governance Performance does not significantly influence financial performance.

Table 7 and Table 8 shows that the coefficient values for GS are 0.266 (Model 1) and 0.107 (Model 2) with P > 0.05. This reflects that governance score (GS) has a positive but insignificant impact on financial performance of the companies. Hence, Hypothesis 3 is failed to be rejected. Obtaining positive results reflect that GS favourably impacts financial performance of the companies. This can be due to the involvement of the three pillars of good corporate governance namely, transparency, accountability and fairness in dealings. Implementation of such practices can aid in anticipating risks, improving compliance standards and protecting stakeholders (Pratiwi et al., 2018).

Figure 2: Research model



Source: Compiled by the researcher

H_{04}: ESG Performance does not significantly influence financial performance.

Table 7 and Table 8 shows that the coefficient values for ESG are −0.322 (Model 1) and 0.008 (Model 2) with P > 0.05. This reflects that overall ESG scores (ESG) have a negative but insignificant impact on ROCE and insignificant positive impact on ROA of the companies. Thus, Hypothesis 4 is failed to be rejected. The results reflect a mixed relationship between ESG and financial performance of the companies and this suggests that total ESG scores do not significantly impact financial performance.

Furthermore, an interesting observation dictates that financial performance is significantly impacted by the control variables of the model i.e. size and leverage. As per the results, the coefficient values of size and leverage reflects a significant negative influence on financial performance of the companies as proxied by ROCE and ROA with P < 0.05 in both the models. This indicates that sizable companies with significant total assets generate lower returns. This can be due to inclusion of higher amounts of fixed costs in the form of depreciation, insurance etc. Additionally, it was observed that higher use of debt in the capital structure (leverage) is associated with lower financial performance due to the potential addition of cost of debt which adversely affects profitability.

While the present study revealed that individual ESG components positively influence financial performance, other literature arrived at mixed results. In particular, the study conducted by (Pulino et al., 2022) demonstrated that individual Social scores, Governance scores and total ESG scores did not significantly influence ROA. Environmental scores displayed a significant negative impact. This calls for further research to validate the results. Also, (Bruna et al., 2022) revealed that there is no significant evidence to conclude that ESG scores are linearly related with financial performance. On the other hand, (Aydoğmuş et al., 2022) produced opposite results where it was concluded that ESG activities displayed a significant positive association on ROA.

6. CONCLUSION

The introduction of CSR initiatives by the Companies Act 2013 paved the way for corporate entities to move a step beyond financial success and contribute extensively towards society, in particular and environment, in general. Over time, the expectations of the various stakeholders rapidly increased and as a result they started demanding more social participation from the companies. Thus, the corporate entities were encouraged to normalize and formalize their CSR activities. Henceforth, there was a need to expand their range of social activities and develop a more structured framework, which would cover not only socially responsible activities but also environmental practices and transparent governance disclosures. This led to the inception of ESG as a more holistic, integrated and comprehensive framework, adoption of which can drive the companies to financial success. As a result, studying the influence of ESG practices on corporate financial performance becomes essential. For several decades, investigating the linkages between Corporate Economic, Social, and Governance (ESG) practices and financial performance have been the center of academia and industrial research (Buallay, 2019).

To operationalize the research, the effect of individual and total ESG scores on financial performance, as illustrated by ROCE and ROA, of Nifty 50 companies were analyzed using multivariate regression models. The results of the study revealed that individual components of ESG positively influenced the financial performance of the companies. However, significant positive association was displayed only by Social Score which aligns with the studies conducted by (E-Vahdati et al., 2018), (Dong et al., 2022) and (Bissoondoyal-Bheenick et al., 2023). While, insignificant positive association was reflected by Environmental score which is similar to the results obtained by (Aydoğmuş et al., 2022) but contrasted by the results of (Kartadjumena and Rodgers, 2019). Moreover, the governance score displayed positive results which is supported by (Pernamasari, 2019) but dissimilar with (Bissoondoyal-Bheenick et al., 2023). Lastly, mixed results were obtained for overall ESG scores. This result is against the findings obtained by (Lee and Raschke, 2023), (Fatemi et al., 2018) and (Aydoğmuş et al., 2022). In a nutshell, the overall results unveiled a positive influence of ESG elements on financial performance which aligns with the findings of (Hansen and Mowen, 2018), (Velte, 2019), (Pratiwi et al., 2018), (Krishnan et al., 2024).

Therefore, investigating the impact of ESG parameters on financial performance gives insights to various stakeholders on

how socially responsible activities contribute towards financial success. However, this study is not without limitations as the data used is restricted only to the NIFTY 50 companies over a limited time frame of 3 financial years. Also, only two proxies of financial performance (ROCE and ROA) have been considered for the study which may not reflect the financial dynamics of the companies. This calls for further investigations and explorations where, more number of companies and indexes can be considered by prospective researchers with a wider time frame and additional variables for financial performance.

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